

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/786,224 Confirmation No. : 2832  
First Named Inventor : Burkhard KUHLS  
Filed : February 26, 2004  
TC/A.U. : 2436  
Examiner : JOHNSON, CARLTON  
Docket No. : 080437.53236US  
Title : Method for Providing Software to Be Used by a Control  
Unit of a Vehicle

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Appellant requests review of the final rejection set forth in the Office Action dated October 27, 2008. No amendments are being filed with this Request, and this Request is being filed with a Notice of Appeal.

Appellant's claim 1 recites a novel and inventive method of providing software for use by a control unit of a vehicle. Appellant's claim 1 specifically requires generating a software signature certificate using:

- the public key of the software signature site; and
- a secret key of a control entity of a trust center, according to a public-key method.

The combination of Wong and England does not disclose or suggest generating a software certificate in the manner specifically required by claim 1. Furthermore, the Advisory Action makes clear that the rejection is not based on the actual language of claim 1, but instead is based on an improper distillation of the claim that the Examiner considers to be the "gist of the invention."

**I. Wong Fails to Disclose or Suggest Generating a Software Signature Certificate**

The Office Action recognizes that Wong does not disclose or suggest generating a software signature certificate in the manner recited in Appellant's claim 1. The Office Action instead relies upon England for such a disclosure.

**II. England Fails to Disclose or Suggest Generating a Software Signature Certificate in the Manner Recited in Appellant's Claim 1**

England is directed to a digital rights management operating system for protecting rights-managed data from access by untrusted programs.<sup>1</sup> The system of England involves a number of different certificates, including a manufacturer certificate 166, CPU certificate 202, and rights manager certificate 210. England does not disclose or suggest that any of these certificates are generated in the manner required by Appellant's claim 1.

**A. CPU Certificate 202 is Not Generated in the Manner Required by Claim 1**

England discloses that CPU certificate 202 is signed by a private key of the CPU 201.<sup>2</sup> England does not, however, disclose that CPU certificate 202 is generated using a public key of the software signature site and a secret key of a control entity.

**B. Manufacturer Certificate 166 is Not Generated in the Manner Recited in Claim 1**

The Office Action appears to rely upon the generation of the manufacturer certificate 166 for the disclosure of the generation of the software signature certificate recited in Appellant's claim 1.

Manufacturer certificate 166 testifies that the CPU was produced according to a known specification and, "that the manufacturer created the key pair 164, placed the key pair onto the CPU 140, and then destroyed its own knowledge of the private key 'K<sub>CPU-1</sub>'."<sup>3</sup> England discloses that "manufacturer certificate 166 contains the manufacturer's public key K<sub>MFR</sub>, the CPU's public key K<sub>CPU</sub>, and the above testimony. The manufacture signs the certificate using its private signing key, K<sub>MFR-1</sub>."<sup>4</sup>

Although England discloses that manufacturer certificate 166 includes a manufacturer's public key and a CPU's public key, England does not disclose or

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<sup>1</sup> Abstract.

<sup>2</sup> Column 9, lines 64-65.

<sup>3</sup> Column 7, line 66 - Column 8, line 2.

<sup>4</sup> Column 8, lines 10-13.

suggest that either of these public keys are a public key of a software signature site as recited in Appellant's claim 1. Similarly, England does not disclose or suggest that the manufacturer's private key "is a secret key of a control entity of a trust center" as recited in Appellant's claim 1.

Nevertheless, the Response to Arguments section of the Office Action states that, in England, the manufacturer is a software developer and that the CPU is a control entity. Even if it were assumed that the CPU is, "a control entity of a trust center," England discloses that certificate 166 includes the public key of the CPU,  $K_{CPU}$ , and not the private key  $K_{CPU}^{-1}$ . In contrast, the software signature certificate of Appellant's claim 1 is generated using a secret key of a control entity.

Furthermore, even if it were assumed that the manufacturer is a software developer, there is no disclosure or suggestion that the manufacturer's public key is "of the software signature site" as required by claim 1.

The Office Action maintains that England discloses a trust center because column 8, line 66 – column 9, line 3 allegedly discloses, "a trusted center or trusted third party for certificate signing." The cited portion of England discloses that "operating system-level components [are] digitally signed by their developers or a trusted third party". Notably absent from this or any other portion of England is disclosure or suggestion of a secret key of a control entity of a trust center. Further, England does not disclose or suggest any relationship between the "third party" and manufacturer certificate 166. Accordingly, England does not disclose or suggest generating a software signature certificate in the manner recited in Appellant's claim 1.

Accordingly, England does not disclose or suggest that manufacturer's certificate 166 is generated in the manner required by claim 1.

**C. Rights Manager Certificate 210 is Not Generated in the Manner Recited in Claim 1**

England discloses that rights manager certificate 210 extends to a standard digital certificate and identifies a trusted application.<sup>5</sup> England does not, however, disclose that rights manager certificate 210 is generated using a public key of the software signature site and a secret key of a control entity.

**III. The Rejection is Based on an Improper Distillation of Appellant's Claim Language**

Instead of addressing Appellant's arguments, the Advisory Action merely reiterates, without further explanation, the Examiner's previous arguments, and then provides a discussion that is divorced from the actual claim language. For example, the Advisory Action states "[i]s Applicant's invention merely an accumulation of different types of certificates and their associated signatures...?" Appellant's invention is defined by the claims, and claim 1 requires generating a software signature certificate in a particular manner, which is not disclosed or suggested by the combination of Wong and England.

The Advisory Action then proceeds to state that

The concept and usage of a certificate mechanism as a security and access control mechanism is well known in the art. The usage of software to operate an entity such as a control unit that controls a vehicle is well known in the art. Computer controlled units for controlling the operation of a vehicle have been in use for quite some time. The usage of well known in the art techniques such as digital signature has been used as a security mechanism for quite some time.

Assuming, *arguendo*, that these statements are correct, this still does not explain how the combination of Wong and England discloses or suggests generating a software signature certificate in the manner specifically required by the language of Appellant's claim 1.

The Advisory Action then proceeds to state that "Applicant's claimed invention appears to be a large set of well known in the art certificates utilized as a security mechanism for a vehicle software system." Again, Appellant's

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<sup>5</sup> Column 9, lines 22-28.

invention is defined by the claims, which requires generating a software signature certificate in a particular manner. If, as asserted in the Advisory Action, generating this certificate in the manner recited in claim 1 is so well known, then the Patent Office should provide a prior art disclosure of generating the certificate in the manner required by the claim. A *prima facie* case of obviousness cannot be established by ignoring the actual claim language and then concluding, without any evidence, that the claimed invention is well known.


#### **IV. Conclusion**

Because Wong and England are completely silent with respect to generating a software signature site in the manner required by the express language of Appellant's claim 1, the combination does not render claim 1 obvious. Thus, the obviousness rejection of claim 1 is improper and should be reversed.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket # 080437.53236US).

Respectfully submitted,

February 27, 2009

  
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